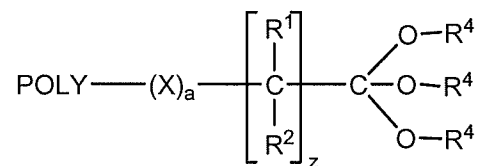


Amendments to the Claims

Please amend claims 29 and 56 as indicated below. Please cancel claims 1-27, 32-37, 55 and 57-85 without prejudice. Currently amended claims are presented with markings to indicate the changes made, wherein a ~~strike through~~ is used to designate deletions and underlining is used to designate additions. This listing of claims will replace all prior versions, and listings, of claims in the application.

1-27. (Canceled).

28. (Previously presented) A polymer having the following structure:



wherein:

POLY is a water-soluble polymer segment having a nominal average molecular weight of from about 2,000 daltons to about 25,000 daltons;

(a) is either zero or one;

X, when present, is a spacer moiety;

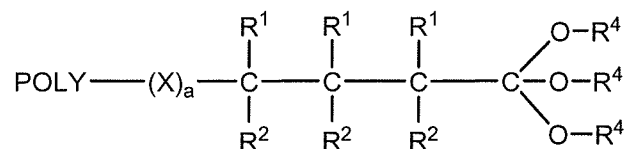
(z) is an integer from 1 to 24;

R<sup>1</sup>, in each occurrence, is independently H or an organic radical selected from the group consisting of alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, and substituted aryl;

R<sup>2</sup>, in each occurrence, is independently H or an organic radical selected from the group consisting of alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, and substituted aryl; and

each R<sup>4</sup> is a either (i) an organic radical independently selected from the group consisting of alkyl, substituted alkyl, alkenyl, substituted alkenyl, alkynyl, substituted alkynyl, aryl, and substituted aryl, or (ii) one or more atoms that combine with another R<sup>4</sup> or the remaining R<sup>4</sup> moieties to form a cyclic ortho ester structure.

29. (Currently amended) The polymer of claim 28, wherein (z) equals three and the polymer has the following structure:



~~wherein POLY, X, (a), each R<sup>1</sup>, each R<sup>2</sup> and each R<sup>4</sup> are as previously defined.~~

30. (Original) The polymer of claim 29, wherein each occurrence of R<sup>1</sup> and R<sup>2</sup> is H.

31. (Withdrawn) The polymer of claim 29, wherein the R<sup>1</sup> attached to the carbon α to the carbon in the ortho ester moiety is alkyl, all other R<sup>1</sup> variables are H, and all R<sup>2</sup> variables are H.

32- 37. (Canceled).

38. (Original) The polymer of claim 28, wherein POLY is selected from the group consisting of a poly(alkylene oxide)s, poly(vinyl pyrrolidone), poly(vinyl alcohol), polyoxazoline, poly(acryloylmorpholine), and poly(oxyethylated polyol).

39. (Original) The polymer of claim 38, wherein POLY is a poly(alkylene oxide).

40. (Original) The polymer of claim 39, wherein the poly(alkylene oxide) is a poly(ethylene glycol).

41. (Original) The polymer of claim 40, wherein the poly(ethylene glycol) is terminally capped with an end-capping moiety.

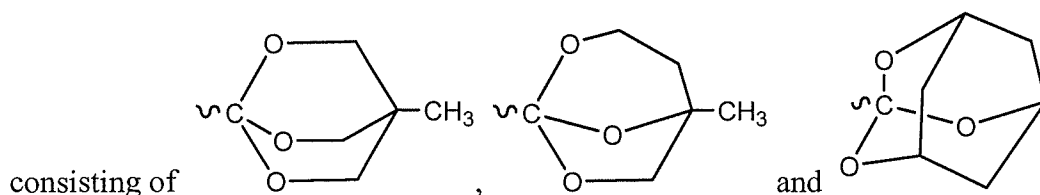
42. (Original) The polymer of claim 41, wherein the end-capping moiety is independently selected from the group consisting alkoxy, substituted alkoxy, alkenyloxy, substituted alkenyloxy, alkynyloxy, substituted alkynyloxy, aryloxy, substituted aryloxy, and hydroxy.
43. (Original) The polymer of claim 42, wherein the end-capping moiety is alkoxy.
44. (Original) The polymer of claim 43, wherein the alkoxy is methoxy.
45. (Withdrawn) The polymer of claim 42, wherein the end-capping moiety is hydroxy.
46. (Canceled).
47. (Canceled).
48. (Previously presented) The polymer of claim 40, wherein the poly(ethylene glycol) has a nominal average molecular weight of from about 5,000 daltons to about 20,000 daltons.
49. (Original) The polymer of claim 28, wherein (a) equals zero.
50. (Withdrawn) The polymer of claim 28, wherein (a) equals one.
51. (Withdrawn) The polymer of claim 50, wherein X is independently selected from the group consisting of -O-, -S-, -C(O)-, -C(O)-NH-, -NH-C(O)-NH-, -O-C(O)-NH-, -C(S)-, -CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, -O-CH<sub>2</sub>-, -CH<sub>2</sub>-O-, -O-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-O-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-O-, -O-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-, -O-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-O-, -C(O)-NH-CH<sub>2</sub>-, -C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-, -C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-, -C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-,

-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-,  
-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-, -C(O)-O-CH<sub>2</sub>-,  
-CH<sub>2</sub>-C(O)-O-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-C(O)-O-CH<sub>2</sub>-, -C(O)-O-CH<sub>2</sub>-CH<sub>2</sub>-, -NH-C(O)-CH<sub>2</sub>-,  
-CH<sub>2</sub>-NH-C(O)-CH<sub>2</sub>-, -CH<sub>2</sub>-CH<sub>2</sub>-NH-C(O)-CH<sub>2</sub>-, -NH-C(O)-CH<sub>2</sub>-CH<sub>2</sub>-,  
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-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-, -O-C(O)-NH-CH<sub>2</sub>-, -O-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-, -NH-CH<sub>2</sub>-, -NH-CH<sub>2</sub>-CH<sub>2</sub>-,  
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-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-, -CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-C(O)-,  
-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-C(O)-CH<sub>2</sub>-,  
-CH<sub>2</sub>-CH<sub>2</sub>-CH<sub>2</sub>-C(O)-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-C(O)-CH<sub>2</sub>-CH<sub>2</sub>-, -O-C(O)-NH-[CH<sub>2</sub>]<sub>h</sub>-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>j</sub>-,  
-C(O)-NH-(CH<sub>2</sub>)<sub>1-6</sub>-NH-C(O)-, -NH-C(O)-NH-(CH<sub>2</sub>)<sub>1-6</sub>-NH-C(O)-, and  
-O-C(O)-NH-(CH<sub>2</sub>)<sub>1-6</sub>-NH-C(O)-, bivalent cycloalkyl group, an amino acid, -N(R<sup>6</sup>)-, and  
combinations of two or more of any of the foregoing, wherein R<sup>6</sup> is H or an organic radical  
selected from the group consisting of alkyl, substituted alkyl, alkenyl, substituted alkenyl,  
alkynyl, substituted alkynyl, aryl and substituted aryl, (h) is zero to six, and (j) is zero to 20.

52. (Canceled).

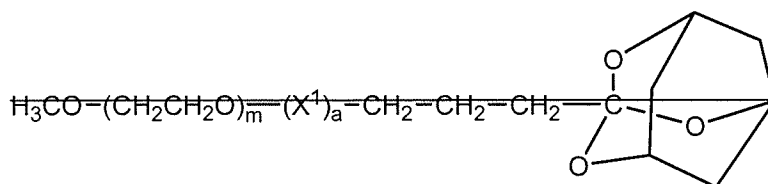
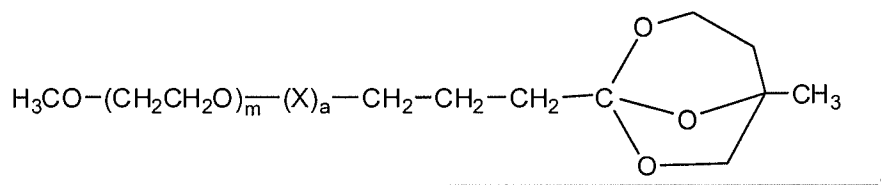
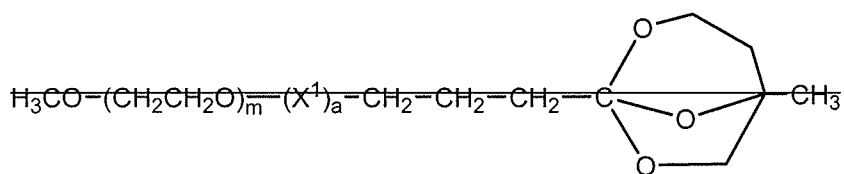
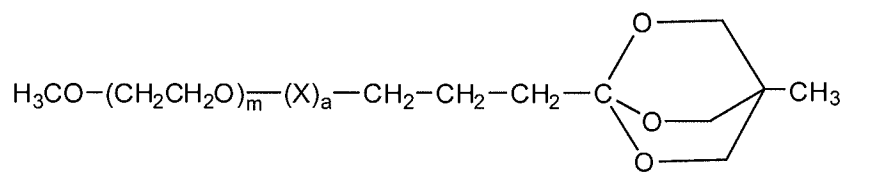
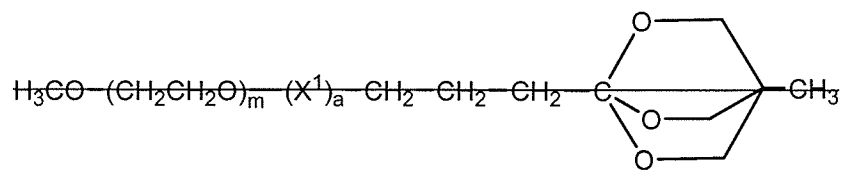
53. (Previously presented) The polymer of claim 28, wherein each R<sup>4</sup> combines with another R<sup>4</sup> or the remaining R<sup>4</sup> moieties to form an ortho ester cyclic structure.

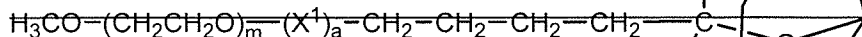
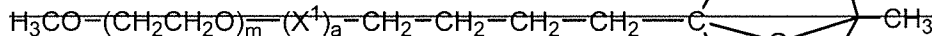
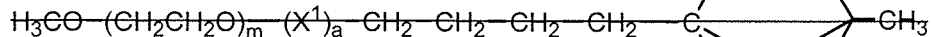
54. (Previously presented) The polymer of claim 53, wherein each R<sup>4</sup> combines with another R<sup>4</sup> or the remaining R<sup>4</sup> moieties to form an ortho ester cyclic structure selected from the group

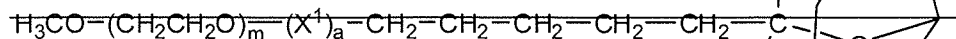
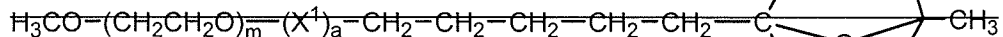
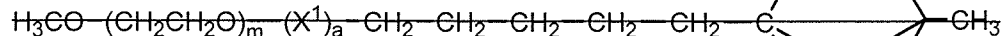


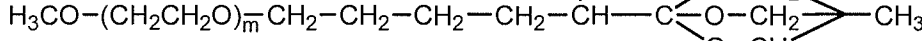
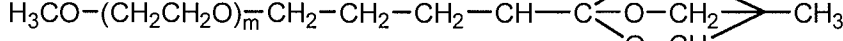
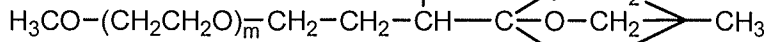
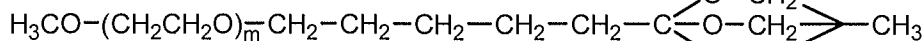
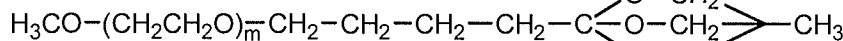
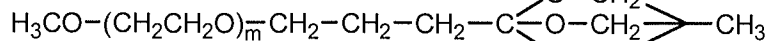
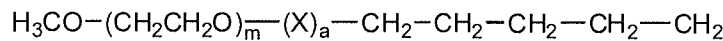
55. (Canceled).

56. (Withdrawn and currently amended) The polymer of claim 28, selected from the group consisting of

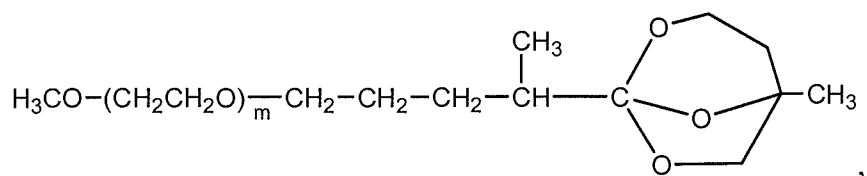
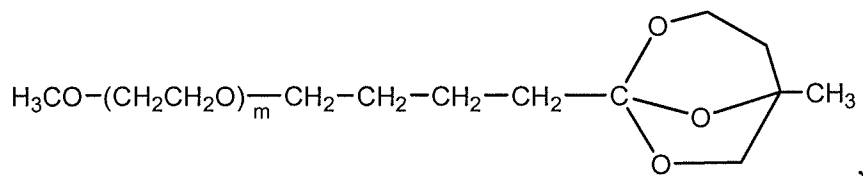
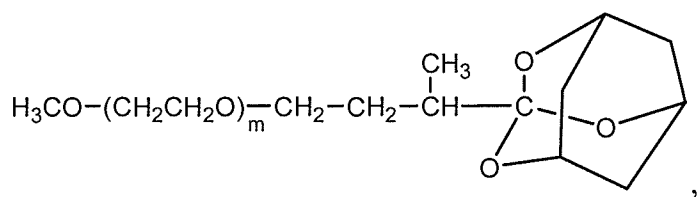
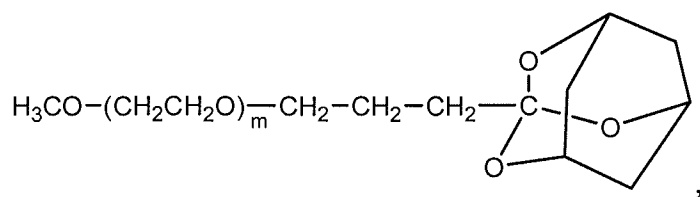
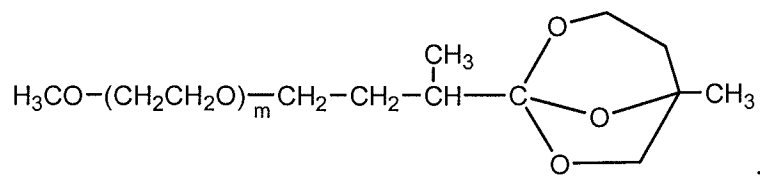
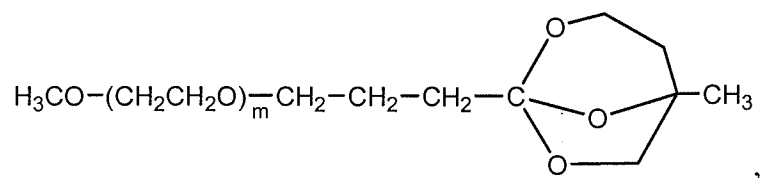


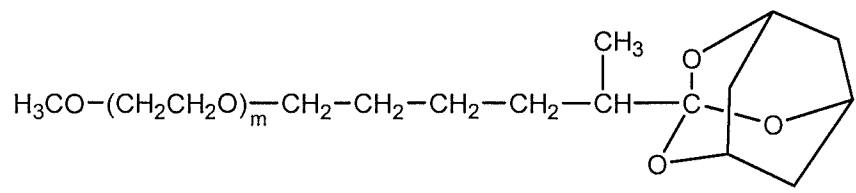
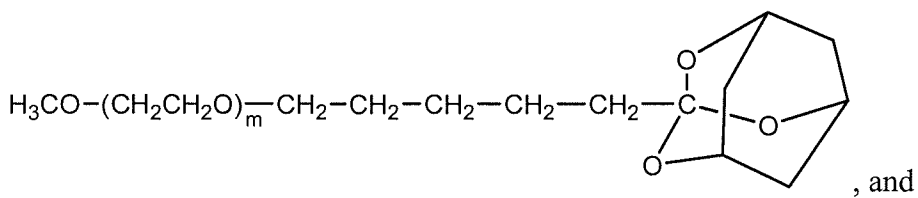
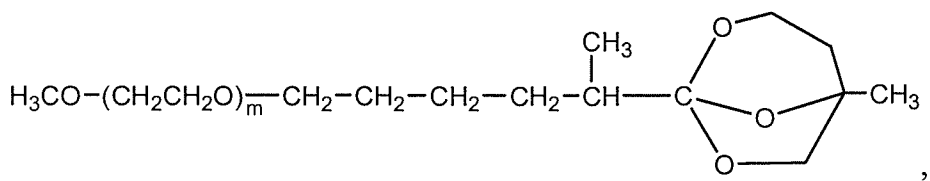
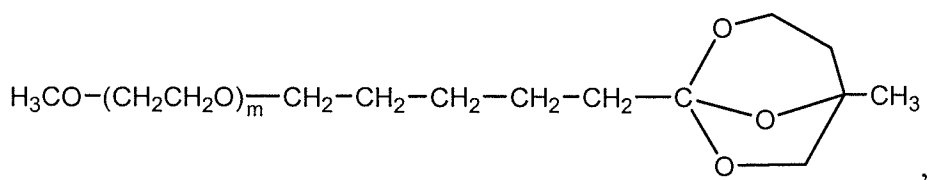
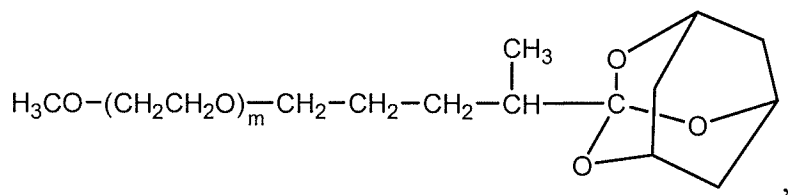
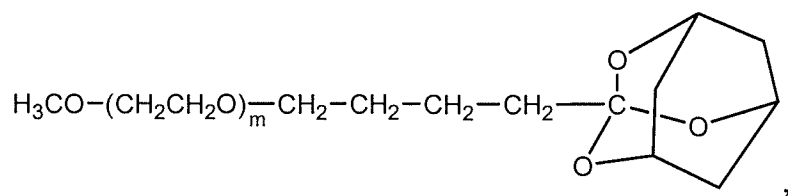












wherein (m) is 2 to 4000, (a) is zero or one, and  $\text{X}^+$ , when present, is a spacer moiety.

57-85. (Canceled).

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